REVISION TABLE

| REV | DATE | DESCRIPTION |
|---|---|---|
| A | 30/04/2008 | First emission |
| B | 17/11/2010 | Reference norms changed |
| C | 09/10/2017 | Norm IATF 16949: 2016 upgrade |
| D | 26/09/2022 | Added paragraph 9 |

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# 1 Scope

Define principles that rule relationships between Cromodora Wheels and suppliers, with reference to Quality and required reliability, concerning supplied products and complete specific requirements of Cromodora Wheels.

## 1.1 Generals

Quality and reliability of a product are the result of a coordinated action of all activity areas present in a company. Main activities to reach these goals are

- Project
- Correct /adequate industrialization
- Definition of working cycles and final control checks
- Machinery choice (machinery equipment, check instruments, ecc.)
- personnel training
- supplier monitoring
- information collection and broadcast
- eventual corrective actions.

All prescriptions in the present manual aim to inform all Suppliers about Cromodora Wheels needs, so that the means and necessary resources are granted to reach quality and reliability levels for the product and the process.

# 2 Quality, environmental requirements and committments for the supplier

- The supplier shall have written, and updated prescriptions related to the quality and reliability requirements that concern products for Cromodora wheels.
- These prescriptions shall be available for Cromodora Wheels at any time.
- For all critical suppliers (suppliers listed in the approved supplier list) Cromodora Wheels requires IATF 16949:2016 certificate. If this certification is not available, ***ISO 9001:2015*** is accepted. The supplier will submit a plan detailing how to obtain the above-mentioned certification.
- For all critical suppliers (suppliers listed in the approved supplier list) Cromodora Wheels requires a PSB nomination (product safety officer).
- Cromodora Wheels considers ISO 14001 as a fundamental target, and it is a preferential evaluation method.
- All delivered products shall be in compliance with Italian and international laws for what concern safety, environment, ecology. The supplier shall store all documents related to materials used in the production flow. Please be aware that all materials shown in table 1 cannot be used, unless the drawing requires their use.



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- The supplier shall store and keep all technical documents received by Cromodora Wheels. If some documents are missing, the supplier shall promptly require them. Based on the received documents the supplier will adequate its internal quality documents.
- The supplier shall not provide the documents given by Cromodora to third parties, unless a specific authorization is given by Cromodora itself.
- The supplier shall ensure the confidentiality about all information related to the products. The supplier shall ensure that its documents, and the ones given by Cromodora, are stored and kept available during production and quality control.
- The supplier shall timely ensure that the industrialization and realization of the required products is in compliance with the technical requirements and the foreseen production volumes.

**Table 1: Prohibited materials**

The details of the prohibited materials can be found at the following web address: http://www.reach.gov.it/

# 3 System and method of Quality Assurance

In order to meet the requirements explained at § 1.1 the supplier shall have an internal organization that ensure the conformity of the supplied product to the quality and reliability regulations required by Cromodora Wheels. The supplier shall ensure the main quality tools in order to grant the quality of its deliveries as listed below.

## 3.1 F.M.E.A

The supplier shall evaluate the potential causes and effects to the process, in case of delivered defected products (process F.M.E.A.) and in case the supplier is responsible also for the design, a design F.M.E.A is required. In order to analyze the potential defects, the supplier shall use the method F.M.E.A. as suitable instrument to prevent and eliminate any potential risk, through a systematic analysis of possible failure modes, based on their severity and detection. Methods used to adopt this instrument shall be in compliance with automotive regulations (AIAG Manual).

## 3.2 Production planning

The supplier, in the choice and in the development of its industrial system, shall grant the necessary tools to meet product quality and reliability requirements. The supplier shall ensure the suitability of the product and its resistance. Methods to evaluate that a supplied product is suitable to carry out the operation in the given tolerances required by Cromodora Wheels, shall be similar to those listed on the AIAG manual or other norms accepted in the Automotive system.

## 3.3 Process and product control plan

The supplier shall issue a control plan for the delivered product, with attached studies and analysis to show the suitability of the



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product and the necessary measures to maintain the product conformity. This control plan shall be issued following the prescription given in the AIAG Manual, or other norms required in the Automotive system. Following IATF prescription, the control plan shall contain the following elements:

**General elements:**

- Control plan number
- Emission date and revision number
- Customer number (see customer requirements)
- Name and Plant
- Part number code
- Name and description of the Part number
- Product modification level
- Product phase (prototype, pre-serie, production)
- Reference person
- Part/number of the process phase
- Process Name/operation description
- Area/Team responsible

**Product control:**

- Product special characteristics
- Further characteristic to check (number, product or process)
- Specifications/tolerances

**Process control:**

- Process parameters (process set up included)
- Special characteristic related to the process
- Machines, equipments, production gauges.

**Methods:**

- Measurements evaluation technics
- Poka yoke
- Sample size and frequency
- Method and control

**Action plan and corrective actions:**

- Action plan

The supplier shall ensure the process control of the production process, with a continuous monitoring of the set parameters; all critical characteristic in the process shall be kept under control.

The necessary actions to verify that the productive process maintain the initial conditions are as follows:

- Process self-adjustment: this is the most actual and reliable criteria in the automation system that allows the process self-adjustment towards the detected deviations;



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- Variable controls: through control charts (X-R), the main causes for process variability are detected, this allows therefore to activate corrective actions to prevent the production of not ok parts;
- Characteristic controls: through some kind of charts all information gathered with normal checks (GO/NP GO) are used to carry out corrective actions to reduce systematically all defects

In order to grant a capable process with a statistic control the supply shall define as follows:

- Product and process critical characteristics
- Capability machine and process targets (Cm, CmK, Cp, CpK);
- An adequate control plan that allows to reach the quality required targets.

The required process capability of a characteristic is referred to the critical characteristic itself as given in the table below

| **Type of characteristic** | **Variables statistic control** (characteristic measurable with variables) | | **Characteristic statistic control** (characteristic not measurable with variables) |
|---|---|---|---|
| **Critical /Safety Characteristic** | 1) Cm CmK<br>2) Cp CpK | ≥ 1,67 | ZERO DEFECTS |
| **Significant Characteristic** | 1) Cm CmK<br>2) Cp CpK | ≥ 1,33 | |

## 3.4 Record and storage of the check and control results

The supplier shall maintain an adequate record and storage system with reference to the control results. These records shall be stored for the following period of time:

- 15 years (or product lifetime, for spare parts one year more), for all safety characteristic or in accordance with legislative constraints.
- 2 years for all other checked characteristics.

The supplier is also responsible towards its sub-suppliers; it shall ensure that all the characteristics identified in their system are monitored as described in § 3.3. All record documents, sub suppliers included, shall be available for Cromodora Wheels if required.

## 4 Instrument and control personnel

The supplier shall have control devices and equipment's, in order to ensure that all required checks are carry out to guarantee product characteristics required by Cromodora in the technical documents, during all production steps. Moreover all control devices shall be maintained, calibrated, verified following specific maintenance plans.



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Also the personnel shall be adequately qualified in order to carry out all the controls actions.

The supplier shall record all activities related to the personnel training, in order to provide evidence of the personnel qualification level.

## 4.1 Production, control, test devices given by Cromodora Wheels

The supplier shall carefully use and store all production, control, check devices provided by Cromodora Wheels. These devices shall be kept efficient by ordinary maintenance, unless different agreement between the parties. Changes, modifications, alterations are not allowed. If the above-mentioned devices require an extra maintenance or eventual modifications, that could lead to defects on the products, the supplier will promptly inform Cromodora in order to receive further instructions. The supplier shall verify the product conformity after the device modification and any deviation detected shall be reported to Cromodora Wheels.

Similar prescription is to be carried out in case of ordinary/extraordinary maintenance referred to control and check devices.

# 5 Logistic Requirements

The choice of an adequate packaging system may affect the final product quality.

The supplier shall agree with Cromodora an adequate packaging in order to ensure that all products are delivered in a perfect condition. Any variations to the agreed packaging conditions shall be previously approved by Cromodora Purchase dept. and by Plant Quality dept in writing.

The supplier shall send an order confirmation; all delivery dates given in the confirmation order shall be observed. Eventual safety stocks required by Cromodora shall be granted. A management system referred to the materials is required (FIFO)

# 6 Identification and traceability

The supplier shall have a system in order to ensure:

- Identification of raw materials, semi-finished products stocked in its warehouses.
- Identification of “ok parts" e "not ok parts" during the entire process flow.
- Identification of the finished/ approved product.
- Identification and segregation of the “scrap part” “segregated parts”

Identification of the product status shall be ensured with reference colors:

- GREEN: finished approved part
- WHITE: approved semi-finished
- ORANGE: not approved –to be reworked (if applicable)
- RED: scrap part
- LIGHT BLUE: prototype part

The supplier shall have a system that allows a univocal identification with reference to production batch, production date, control results, eventual corrective actions. This system shall be approved by Cromodora Wheels.



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# 7 Product changes control

## 7.1 Changes

The supplier cannot carry out any changes on the product, without a previous written authorization by Cromodora Wheels.

If some changes have to be applied, the supplier will submit this request with all documents that certifies the tests carried out for the requalification, similar to the ones carried out for the product before the changes.

The modified product will be delivered only after the approval by Cromodora Wheels.

All the changes introduced in the system (required by Cromodora Wheels or by the supplier) shall be identified with the introduction date of the product changes and/ or on the productive flow (materials/manufacturing operations/treatments. Etc.) The supplier shall inform about the first three deliveries after the changes have been introduced.

The introduction of a new sub-supplier can be considered as change on the product.

## 7.2 Deviations and concessions

If the supplier detects variations with reference to the technical specifications, a written authorization shall be asked to Cromodora in order to deliver the products.

Please refer to the following explanations:

Variation: written authorization, released before production or before a service is performed, that allows to deviate from the given requirements for a certain quantity or for a certain period of time.

Concession: written authorization to use a certain quantity of materials, components or already produced stocks that are not in compliance with the specified requirements

Quality Plant Management evaluates and allow to deliver the above-mentioned products, highlighting eventual commitments for the supplier (referring to the quality or to the time of delivery) or further duties for the supplier itself. The identification of the product will clearly report DEVIATION/ CONCESSION and a reference to the authorization document of Cromodora.

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# 8 Qualification and Supplier evalutation

## 8.1 System Audit

In order to agree on a business agreement with a new supplier, or to extend a supplier activity on new production line, or in case of significant changes in the supplier organization (technologies, personnel organization) or changes on the product,

Cromodora Wheels may perform a system audit, in order to evaluate the supplier eligibility with reference to its organization and production capability to fulfill quality and reliability requirements.

The system audit is performed following Cromodora Wheels procedures or other documents required by the final customer.

In agreement with the supplier, Cromodora Wheels can carry out system audits periodically, to verify the complete and correct applications of the requirements contained in the present document and in the product specification.



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## 8.2 Product audit and delivery checks

Cromodora Wheels may carry out conformity checks on the delivered products, when delivered or during the productive process. Be advised that the whole batch could be refused if Cromodora Wheels Quality detects some non-conformities in the verified batch.

## 8.3 Non-conformities

Cromodora Wheels quality, on the basis of the checks carried out on the received products, will inform the supplier if some non-conformities are detected, by e-mail or in writing.

If required by Cromodora Wheels, the supplier will reply within 10 working days giving evidence of the following items:

-non-conformity main cause

-chosen corrective action (immediate/permanent)

-date and responsibility for the chosen corrective actions

-corrective action effectiveness

The implemented corrective actions shall be approved by Cromodora Wheels

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### 8.3.1 Charges and reimbursements

In case some batches are not delivered with the foreseen conformity documents (material certificates ecc) or in case the documents are not complete, Cromodora Wheels may perform these checks internally or let the controls be performed by third parties.

In case of late deliveries all expenses caused by special transports to grant timely deliveries will be charged to the supplier.

Moreover, if Cromodora Wheels, for any productive need, has to use non-conforming products/batches, Cromodora has the right to carry out sorting actions, re-work operations in order to obtain conform products. All the resulting expenses will be charged to the supplier.

## 8.4 Quality evaluation

The quality evaluation is submitted to the supplier on a yearly basis, as results of the quality performances of the supplier.

The evaluation is represented by an index named “Dynamic reliability Level”.

If the supplier detects some mistakes, a further check can be requested in writing to the Plant Quality management.

The supplier shall submit an improvement action plan within a month’s time from receipt date. The improvement plan shall contain corrective actions, time and responsibilities.

## 8.5 Sub-suppliers

The supplier is responsible that all products purchased from its suppliers or given to third parties for further manufacturing actions/treatments, are in compliance with the quality requirements of Cromodora Wheels.



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The supplier shall have all necessary documents concerning inspection checks, trial tests, corrective actions or changes authorized by Cromodora.

Provided the delivery conditions, the supplier verifies the eligibility of its sub-suppliers. The supplier has to ensure that the sub-supplier has a Quality Assurance system, similar to the one of the suppliers.

Whatever the system implemented by the sub-supplier, Cromodora Wheels shall be granted of a timely reaction in case of non-conformities on the products. Further manufacturing actions on the non-conform product, all corrective actions, evaluations criteria towards the sub-suppliers shall be shared with Cromodora, if required.

All chosen sub-suppliers shall be communicated and approved by Cromodora Wheels. If during the supply period, a sub-supplier is changed, Cromodora Wheels has to be informed. For all critical sub-suppliers or for all sub-suppliers that directly influence the quality of the supplied product, the supplier has to encourage an improvement plan related to the quality system so that main norms requirements are reached.

# 9 Data and information security management requirements

In line with our Quality System and the requests of Automotive Manufacturers, in relation to the development of activities that will see the full collaboration between ours. Company, the Supplier is required to implement the appropriate methods of Confidentiality, Integrity, and Availability for the secure processing of data and information in accordance with the principles set out in the ISO 27001 and / or VDA ISA standard.
In detail, the Supplier undertakes:

- ✓ to treat with the utmost confidentiality the samples, data, documents, information relating to the product and projects under development as well as all the intellectual property of Cromodora Wheels Spa shared for work relationships and which will be transmitted by the staff of Cromodora Wheels Spa,
- ✓ to inform / sensitize its collaborators (internal and / or external) who will be involved in the activities,
- ✓ not to disclose to third parties the information transmitted unless expressly authorized and issued by Cromodora Wheels Spa
- ✓ to promptly communicate any events / anomalies affecting the Confidentiality, Integrity and Availability of data, documents and information owned by Cromodora Wheels Spa
- ✓ to sign a specific Non Disclosure Agreement (NDA) (only for supplier considered critical by Cromodora)
- ✓ to activate the tools and operating methods communicated for the secure mutual exchange of data (e.g., VPN. SFTP server, Supplier Portal, etc.)
- ✓ to undertake a path of continuous improvement for the implementation of the principles of ISO 27001 and / or VDA ISA with the aim of obtaining certification of compliance with ISO 27001 or Tisax Label.



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